

***What Is Claimed Is:***

1        1.        A method for increasing image resolution in a palm print scanner,  
2        comprising the steps of:

- 3            (1)        synchronizing a nutating mirror with a camera frame sync;  
4            (2)        scanning a frame of an image at a first nutation position;  
5            (3)        positioning the nutating mirror by a fraction of a pixel amount in  
6            one direction to obtain a next nutation position;  
7            (4)        scanning the frame of another image at the next nutation position;  
8            (5)        repeating steps (3) and (4) until an image is obtained for each  
9            nutation position needed; and  
10          (6)        mapping sub-pixels from each of the images obtained in steps (2),  
11          (4), and (5) to an image of pixels having a higher resolution than the  
12          respective images of sub-pixels.

1        2.        The method of claim 1, wherein step (6) comprises the steps of:

- 2            (a)        gathering each image of sub-pixels from memory;  
3            (b)        allocating memory for the higher resolution image;  
4            (c)        mapping sub-pixels from the first nutation position image onto the  
5            higher resolution image; and  
6            (d)        interlacing sub-pixels from each of the images obtained in steps  
7            (4) and (5) onto the higher resolution image.

1        3.        A palm print imaging system, comprising:

- 2            a light emitting diode (LED);  
3            an illuminator mirror;  
4            a condenser lens;  
5            a conformable prism, wherein said LED, said illuminator mirror, and said  
6            condenser lens provide color illumination to said conformable prism to obtain an  
7            image reflected from said conformable platen;

8 a plurality of mirrors;  
9 a nutating mirror, wherein said plurality of mirrors direct said image to  
10 said nutating mirror;  
11 a driver for controlling said nutating mirror; and  
12 a camera for capturing said image,  
13 wherein said camera provides signals to said driver to synchronize said  
14 nutating mirror with camera frame syncs.

1 4. The system of claim 3, wherein said conformable prism is spring loaded.

1 5. The system of claim 3, wherein said conformable prism is used as a palm  
2 platen.

1 6. The system of claim 3, wherein said nutating mirror is repositioned to  
2 obtain a plurality of images, wherein said plurality of images are used in an  
3 interlacing recombining scheme to obtain a higher resolution image.

1 7. The system of claim 3, wherein said nutating mirror is two-dimensional  
2 and programmable to allow movement in two different axial directions.

1 8. The system of claim 3, wherein said conformable prism is comprised of  
2 a silicone pad.